REMARKS

The following remarks are made in response to the Non-Final Office Action mailed March 9, 2006. Claims 1-14, 16-24 and 26 were rejected. With this Response, claims 1-14, 16-24 and 26 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejected claims 1-7, 9-14, 19, and 22-24 under 35 U.S.C. 103(a) as being unpatentable over the Hala et al. U.S. Patent No. 6,507,804 in view of the Nakayama et al. U.S. Patent No. 6,163,135.

The Examiner rejected claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Hala et al. U.S. Patent No. 6,507,804 in view of the Nakayama et al. U.S. Patent No. 6,163,135 and in further view of the Fukuda et al. U.S. Patent No. 5,960,373.

The Examiner rejected claim 16 under 35 U.S.C. 103(a) as being unpatentable over the Hala et al. U.S. Patent No. 6,507,804 in view of Nakayama et al. U.S. Patent No. 6,163,135 and in further view of the Smith et al. U.S. Patent No. 5,523,701.

The Examiner rejected claims 17, 20 and 26 under 35 U.S.C. 103(a) as being unpatentable over the Hala et al. U.S. Patent No. 6,507,804 in view of the Nakayama et al. U.S. Patent No. 6,163,135 and in further view of the Naito et al. U.S. Patent No. 6,092,028.

The Examiner rejected claim 21 under 35 U.S.C. 103(a) as being unpatentable over the Hala et al. U.S. Patent No. 6,507,804 in view of the Nakayama et al. U.S. Patent No. 6,163,135 and in further view of the Tamura U.S. Patent No. 6,301,530.

With respect to claims 1 and 22, the Examiner asserts that the Hala reference teaches all aspects of the claims except for a motor having connecting terminals for the application of a supply voltage, with a voltage present between the connecting terminals being an analog signal indicating the operating state of the motor. The Examiner essentially asserts that the Nakayama reference teaches a motor having connecting terminals for the application of a supply voltage, with a voltage present between the connecting terminals being an analog signal indicating the operating state of the motor. Applicant respectfully disagrees that the Nakayama reference teaches this.

As presented, both claims 15 and 22 respectively specify a method and apparatus for detecting an operating state or a change in an operating state of a DC motor having connecting terminals for the application of a supply voltage, with ***a voltage*** present between the connecting terminals ***being an analog signal indicating the operating state of the motor***. This is neither taught nor suggested in the Nakayama, nor in any of the art of record.

The Nakayama reference relates to an apparatus for controlling state of charge/discharge in a hybrid car. As illustrated in Figure 1, the hybrid car includes an engine 10, motor-generators 26, 28 coupled to the engine 10, and a battery 50 coupled to the generators 26, 28. The motor-generators 26, 28 operate as generators supplying electric power to the battery when driven by the engine 10, or operate as motors consuming electric power provided by the battery. As described in column 5, lines 31 to 35, the operating states of these generators 26, 28 is determined by a control CPU from data collected from various components:

> *The control CPU 56 collectively uses data communicated from the battery ECU 68 and various data items supplied from the engine ECU 46 to determine the operating states of the first and second motor-generators 26 and 28.*

As such, even assuming these generators are analogous to the DC motor of the claims, there is no teaching or suggestion of an analog signal between any connecting terminals that indicates the operating state of the motor.

The Nakayama reference teaches that the data supplied to the CPU from the battery ECU includes outputs from a voltage sensor:

> *Outputs from the voltage sensor 70, the current sensor 72 and the temperature sensors 74 are communicated to the battery ECU 68.*
> (See, column 5, lines 25 to 27).

That sensor, however, is actually coupled to the battery and not to any DC motor, or even to the motor-generators 26 and 28. (See Figure 2, and column 5, lines 16-17: "A voltage sensor 70, serving as a voltage detection means for **detecting the terminal voltage of the battery 50** . . . .")(emphasis added).

In this way, the Nakayama reference does not teach using the voltage across supply terminals of a DC-motor as an analog signal indicating the operating state of the DC-motor. As

such, claims 1 and 22, as well as the dependant claims thereon, are not suggested by the art of record.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103 rejections to claims 1-7, 8, 9-14, 16, 17, 19, 20, 21, 22-24, and 26, and request allowance of these claims.

CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-14, 16-24 and 26 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-14, 16-24 and 26 are respectfully requested.

No fees are required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Paul P. Kempf at Telephone No. (612) 767-2502, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being transmitted via facsimile to Facsimile No. (571) 273-8300 on this 9th day of June, 2006.

By: _____
Name: Paul P. Kempf